

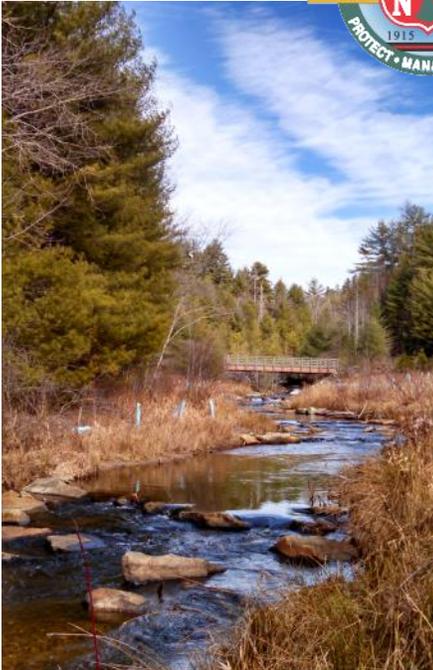


North Carolina Forest Service

An agency of the N.C. Department of Agriculture & Consumer Services

BMP Newsletter

Best Management Practices for Water Quality & Soil Conservation



Can You Dig It? 2015 is the International Year of Soil

All year there will be a special emphasis on how soil is vital to our health, environment, and economy.

The Soil Science Society of America has a website with activities and monthly highlights of how soil interacts with our daily lives: www.soils.org/iys.

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Soil and water are like peanut butter and jelly when talking about forestry BMPs: they naturally go together.

The core theme of most BMPs is to protect water quality from potential sources of polluted runoff. Sediment is one of the main potential pollution sources from improper forestry or agricultural practices. BMPs are designed to keep the sediment from washing into the water, which also naturally conserves the soil.



***DON'T LET
THIS HAPPEN
TO YOUR SOIL!***

BMP Topic: Soil Stabilization

Preventing or curtailing accelerated soil erosion is a key to sustainable land management, regardless of what kind of trees (or crops) you grow.

Cover exposed soil that has the potential to erode or wash into streams, ponds, wetlands or ditches.

Apply and pack down leftover tree tops, branches, laps or slash atop of skid trails, log decks and landings. Do this immediately at the start of the logging and continue through to the end. This will protect the soil from erosion and reduce soil rutting or compaction.

Spread grass seed on streambanks after removing a crossing. Apply erosion control matting to immediately cover exposed soil before the grass sprouts.



On log truck roads, apply gravel or railroad ballast to cover the soil and create a firm base for vehicles.

Another option is to use portable road mat pallets.

Keep mud and soil from being dragged onto the public road at the entrance. The N.C. DOT or Highway Patrol could shut down your job if the mud creates a road safety hazard.

Have the landowner talk with a North Carolina Forest Service County Ranger to learn how to establish and grow the next generation of forest.

Trees are the best tool to conserve our soil and protect our water quality.

Western Region Focus

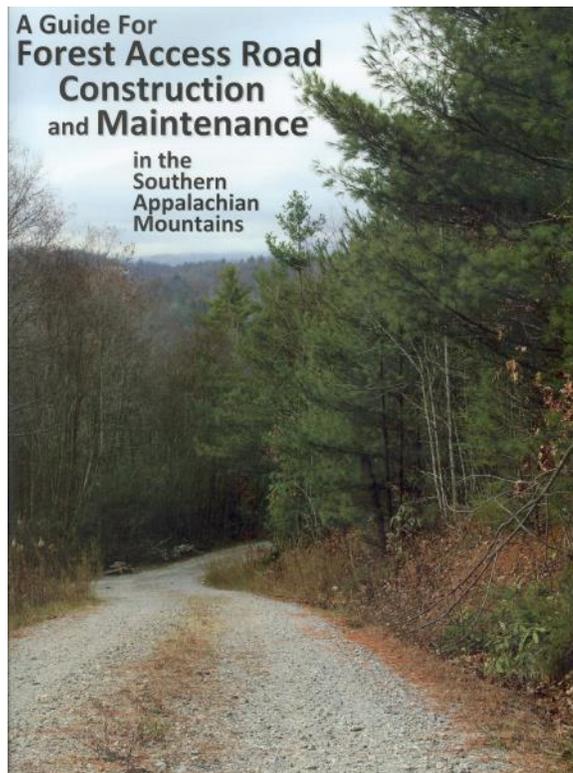
New Road Construction & Maintenance Guide Book

If you need assistance on building or maintaining a forest access road in the mountains, then this book can help.

The North Carolina Forest Service developed this guide as a revision to popular guides produced in the past by the USDA-Forest Service.

Roads in the mountains can be a major water quality and operational challenge. Only build a road if it's absolutely necessary. Take the time to properly design and construct the road at the start, and avoid long-term maintenance problems.

Copies are being distributed to the NCFS District Offices in the Western Region, and an electronic version is available from the [NCFS website](#) in the Water Quality publications section.



UPCOMING EVENTS

APR. 1,2,3 @ Asheville.

[RiverCourse 101 - Stream Morphology Assessment.](#)

Contact NCSU Stream Restoration Program: 919-515-6780.

APR. 14 @ Asheville.

[Erosion & Sediment Control Planning and Design Workshop.](#)

Contact NC-WRRI: 919-515-2815.

APR. 30 @ Waynesville.

2015 Western North Carolina Timber Conference. Contact Eddie Reese at N.C. Forestry Association: 1-800-231-7723

MAY 6,7,8 @ Asheville.

[RiverCourse 201 - Natural Stream Channel Design Principles.](#)

Contact NCSU Stream Restoration Program: 919-515-6780.

JUNE 1 + 2 @ Banner Elk.

[RiverCourse 131 - Assessment and Identification of Riparian Vegetation.](#)

Contact NCSU Stream Restoration Program: 919-515-6780.

JUNE 22 to 26 @ Asheville.

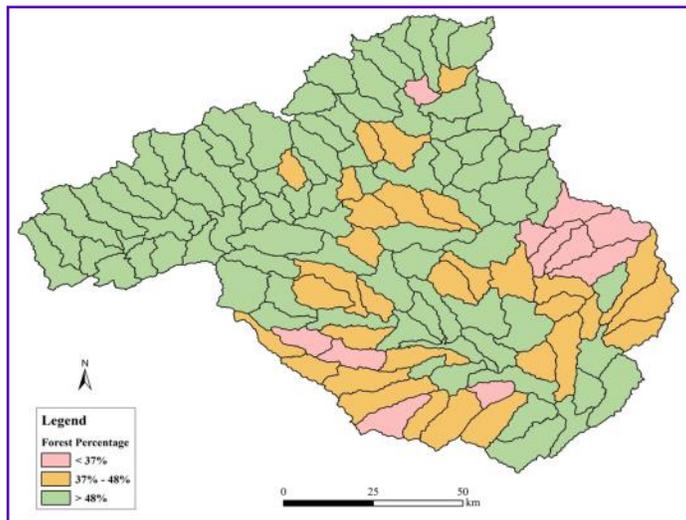
[Teacher's Academy on Sustainable Forestry.](#) Contact NCSU Extension Forestry: 919-515-5518.

Visit the *Hot Topics* at the NCFS website for other events.

Piedmont Region Focus

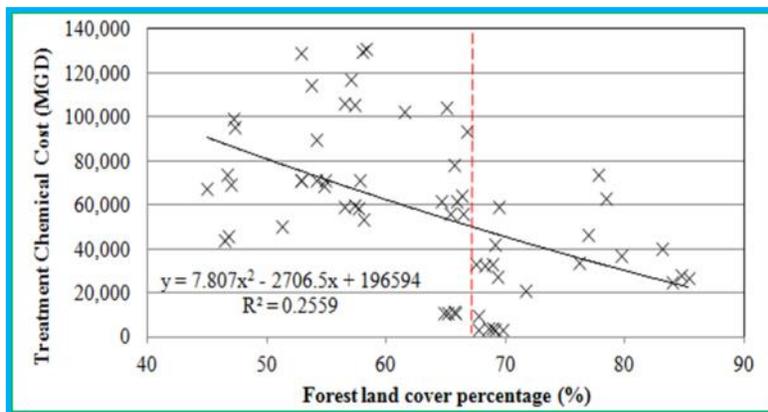
Study of High Rock Lake Watershed Shows Connection between Forests and Water Quality

A study conducted by UNC-Charlotte (UNC-C) for the N.C. Forest Service shows that in watersheds that have a higher percentage of forests, you can expect to also see a higher quality of water coming from those watersheds. The thresholds identified in this study showed that when watersheds are at least 40 to 50 percent covered with forest or natural shrublands, the water quality is noticeably better.



This map developed by UNC-C shows the percentage of forest covering each sub-watershed in the High Rock Lake drainage area.

Another part of this study identified that water treatment costs were lower in sub-watersheds that are covered with at least 65 to 70 percent forest, and this analysis is shown in the graph below.



This study helps us better understand how forests can be valuable for not only timber and wildlife, but also as a tool for protecting and supplying clean, reliable water for future generations.

UPCOMING EVENTS

APR. 21 to 24 @ Raleigh.
Stream Type and Origin
Identification Training.
Contact [John Dorney](#), at
Moffat & Nichol: 919-522-6364.

APR. 22 @ Raleigh.
Project Learning Tree (PLT) K-12
Instructor's Workshop.
Contact NCSU Extension Forestry:
919-515-5518.

APR. 23 + 24 @ Durham, Museum of
Life & Science. [Residential Rain
Garden Certification](#). Contact NCSU
Stormwater Engineering Group:
919-513-2192.

MAY 13,14,15 @ Winston-Salem.
ProLogger Base Course. Contact
Eddie Reese at N.C. Forestry
Association: 1-800-231-7723.

MAY 14 @ Raleigh. [Sediment,
Erosion & Turbidity Control
Workshop and Field Day](#). Contact
NCSU Soil Science: 919-515-2655.

MAY 15,16,17 @ State Fairgrounds in
Raleigh. [Got To Be NC Ag Festival](#).

MAY 22 @ Raleigh. [Rethinking
Swale and Filter Strip Design](#).
Contact NCSU Stormwater
Engineering Group: 919-513-2192.

JUNE 2 to 5 @ Raleigh, NCSU.
[Surface Water Identification Training
and Certification-SWITC](#) (stream
origin and type identification).
Contact NC-DENR Div. of Water
Resources: 919-807-6367

Visit the *Hot Topics* at the NCFS
website for other events.

Eastern Region Focus

Bringing Water Back to the Swamp

The North Carolina Forest Service, U.S. Fish & Wildlife Service, Nature Conservancy and Department of Defense are working to develop and implement a water management and restoration plan at the Dare County Bombing Range. This forest and pocosin area is used for aerial bombing training by the U.S. Navy and U.S. Air Force. The N.C. Forest Service manages the Range through an agreement with the Dept. of Defense.

Over the decades, many drainage canals were dug to drain the lands and improve vehicle access.

However, experience has shown that some of the drained areas allow the organic peat soils to dry out, creating higher wildfire risk potential. The plan is an overview of when, where, and how to retain water in the series of canals and ditches to optimize the soil moisture conditions. Through a series of structures similar to the one seen above, the water levels can be adjusted according to season and Range activities.



UPCOMING EVENTS

MAY 6 @ Beaufort. [Living Shorelines for Erosion Control in Estuaries](#). Contact: [NC Coastal Training Prog.](#)

MAY 26 to 30 @ Wilmington. [Wetland Delineation and Jurisdictional Determination Training](#). Contact Jim Gregory at Watershed Hydrology Consultants: 910-550-4811.

JUNE 3 to 5 @ Wilmington. North Carolina Division of SAF Summer Meeting. Contact [Chairman of the NC Division of SAF](#).

JUNE 4 @ Wilmington. [Living Shorelines for Erosion Control in Estuaries](#). Contact [NC Coastal Training Program](#).

JUNE 15 to 18 @ New Bern. [Teacher's Academy on Sustainable Forestry](#). Contact NCSU Extension Forestry: 919-515-5518.

Visit the *Hot Topics* at the NCFS website for other events.

Funding to Assess Bottomland Forests

The North Carolina Forest Service has been awarded a grant from the USDA-Forest Service's Landscape Scale Restoration Initiative to assess the regeneration and growth of bottomland hardwood and cypress swamp systems of the coastal region. Recent observations of swamps that have been harvested raise questions about how to assure regeneration of a desirable mix of tree species. Also, there is concern about if, or how, the loss of ash species in swamps (due to the invasive insect Emerald Ash Borer) could alter the diversity of trees that grow in North Carolina's bottomlands into the future. Findings from this project may offer insight for woodland owners across the Southern U.S.



North Carolina Forest Service

Forestry Nonpoint Source Branch
1616 Mail Service Center. Raleigh, NC. 27699-1616



Surf The Web

Protect, Manage and Grow Your Forest

www.ncforestservice.gov

NCD&CS Agricultural Services

www.ncagr.gov

Keep Your Home Safe From Wildfire

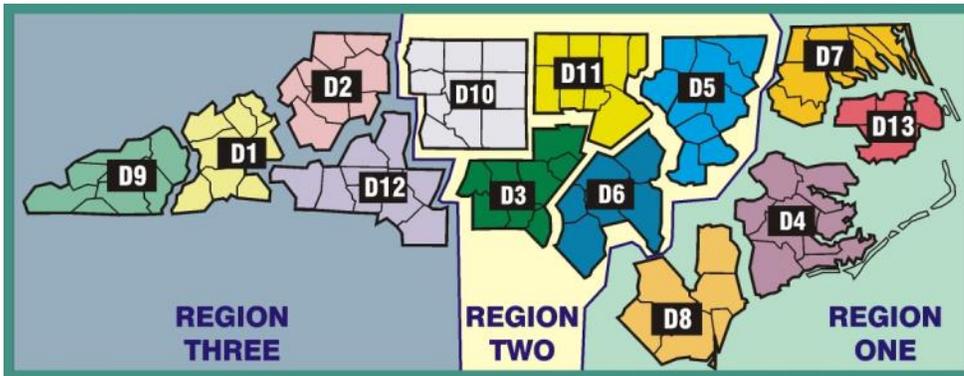
www.ncfirewise.org

Go Out and Learn in the Forest

www.ncesf.org

Locate NC-Grown Farm Products

www.ncfarmfresh.com



Western Region

District Office BMP Contacts

High Country, Northern Foothills: D-2
Lenoir: 828-757-5611
Justin Query, Assistant District Forester

Catawba Valley, Southern Foothills: D-12
Mount Holly: 704-827-7576
Beth Plummer, Water Quality Forester

Central Mountains: D-1
Asheville: 828-667-5211
Caleb Jones, Assistant District Forester

Western Mountains: D-9
Sylva: 828-586-4007
Hugh Hassell, Assistant District Forester

Western Region Office: R-3
Asheville: 828-665-8688
Michael Cheek, Assistant Regional Forester

Piedmont Region

District Office BMP Contacts

Northwest Piedmont: D-10
Lexington: 336-956-2111
Keith Money, Water Quality Forester

North Central Piedmont: D-11
Hillsborough: 919-732-8105
Laura Hendrick, Water Quality Forester

Northeast Piedmont: D-5
Rocky Mount: 252-442-1626
Aaron Levine, Water Quality Forester

Western Sandhills: D-3
Rockingham: 910-997-9220
Matt Vincett, Water Quality Forester

Eastern Sandhills: D-6
Fayetteville: 910-437-2620
Michael Good, District Forester

Piedmont Region Office: R-2
Jordan Lake: 919-542-1515
Mark Bost, Assistant Regional Forester
for Forest Management

Eastern Region

District Office BMP Contacts

Northeastern Coastal Plain: D-7
Elizabeth City: 252-331-4781
James Caddy, Water Quality Forester

Albemarle-Pamlico Peninsula: D-13
Fairfield: 252-926-3041
Jamie Dunbar, Assistant District Forester

Middle Coastal Plain: D-4
New Bern: 252-514-4764
Dennis Register, Assistant District Forester

Southeastern Coastal Plain: D-8
Whiteville: 910-642-5093
Michael Rhodes, Assistant District Forester

Eastern Region Office: R-1
Kinston: 252-520-2402
Jim Slye, Assistant Regional Forester
for Forest Management

Note: Some names have changed in our District BMP Contacts since the 1st quarter 2015 edition of the newsletter. Some folks have retired or moved on to other career opportunities. Welcome Laura Hendrick as our newest Water Quality Forester, working in District 11.

What's Wrong With This Picture?

Tree tops and small logs were packed into this stream channel as a log skidder crossing. If logs must be used to make a crossing, they should be large diameter to make them easier to remove while allowing water to pass through.

Also note the entire SMZ (streamside management zone) was cut along this stream. The logger claimed that this tract was being logged for conversion to an agricultural operation. Even when land-use changes, it is recommended to retain protective buffers along streams and keep debris from clogging the waterways.

